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KYOCERA WIRELESS CORP.
P.O. BOX 928289
SAN DIEGO, CA 92192-8289

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DIEGO KAPLAN

Appeal 2009-005562
Application 10/091,311[1]
Technology Center 2400

Decided: February 1, 2010

Before MAHSHID D. SAADAT, MARC S. HOFF,
and BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] The real party in interest is Kyocera Wireless Corporation.

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from a Final Rejection of claims 11-30. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Appellant's invention concerns a system and method for selecting and implementing optimal Short Message Service (SMS) message encoding in a wireless communications device having SMS capabilities, wherein the system includes an optimizing subsystem and an encoding subsystem. The optimizing subsystem accepts an SMS message, identification of available encoding formats, and information regarding wireless device resource encoding requirements, such as memory usage, for the available encoding formats. The optimizing subsystem evaluates the characters in the SMS message to identify which of the available encoding formats are usable for encoding the characters, determines a memory usage requirement, and selects, as the optimal encoding format having the lowest memory usage. The optimizing subsystem has an output to supply an optimizing signal identifying the optimal encoding format. The encoding subsystem accepts the SMS message and the optimizing signal, and encodes the message in the optimal encoding format. The encoding subsystem also has an output to supply the encoded SMS message to a wireless device memory circuit. The memory circuit supplies the stored SMS message for presentation on a user display or transmission by a transceiver (Spec. 5:4-22).

Claim 11 is exemplary:

> 11. A system for optimal Short Message Service (SMS) character encoding in a wireless communications device having SMS capabilities, the system comprising:

> an optimizing subsystem with an input to accept an SMS message, an input to accept an evaluation control signal, and an output to supply an optimizing signal responsive to SMS message character encoding requirements prior to character encoding of the SMS message; and
>
> a character encoding subsystem with an input to accept the SMS message, an input to accept the optimizing signal, and an output to supply the SMS message in a character encoding format responsive to the optimizing signal.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Moskowitz	US 5,249,220	Sep. 28, 1993
Wolf	US 5,844,922	Dec. 1, 1998
King	US 5,859,594	Jan. 12, 1999
Kim	US 2001/0049289 A1	Dec. 6, 2001
Murray	US 6,539,118 B1	Mar. 25, 2003 (filed Aug. 27, 1999)
Lee	US 6,590,887 B1	Jul. 8, 2003 (filed Aug. 28, 1998)

Claims 11-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lee in view of Moskowitz.

Claim 18 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lee in view of Moskowitz and Wolf.

Claims 19-21, 23, 24, and 28-30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of Moskowitz.

Claims 26 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of Moskowitz and King.

Claim 22 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of Moskowitz and Murray.

Claim 25 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of Moskowitz and Wolf.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the Appeal Brief (filed September 26, 2007), the Reply Brief (filed February 20, 2008), and the Examiner's Answer (mailed December 26, 2007) for their respective details.

ISSUE

The Examiner finds that Lee discloses a mobile communication device that implements SMS encoding (Ans. 4; FF 2). The Examiner finds that Moskowitz discloses that binary bit character encoding formats are evaluated in order to select the fewest binary bit character encoding format for encoding transmitting message (Ans. 4; FF 3-5). The Examiner finds that Moskowitz discloses supplying an optimization signal prior to encoding the message (Ans. 11).

Appellant contends that the combination of Lee and Moskowitz does not disclose an optimizing subsystem that produces an optimizing signal responsive to the SMS message character encoding requirements prior to character encoding of the SMS message (App. Br. 10-11). Appellant contends that Moskowitz discloses a portable transmitter that requires that the text message must be encoded in every available format (4-bit, 5-bit, 6-bit, and variable length binary bit representations) prior to the transmitter selecting which format results in the fewest bits (App. Br. 11; FF 3-5). Appellant contends that the claim limitation requires character encoding and that the combination of Lee and Moskowitz is improper since Lee teaches signal encoding and Moskowitz teaches character encoding (App. Br. 11). As such, Appellant contends that there is no reasonable expectation of success when combining the references (App. Br. 12). Further, Appellant

contends that the transmitter in Moskowitz does not encode a message in response to an optimizing signal (App. Br. 12).

Appellant's contentions present us with the following issue:

Did Appellant show that the Examiner erred in finding that the combination of the cited prior art discloses a system for optimal SMS character encoding having an optimizing subsystem that generates an optimizing signal for controlling when a character encoding subsystem supplies the SMS message in a character encoding format responsive to the optimizing signal, wherein the optimizing signal is responsive to the SMS message character encoding requirements prior to character encoding of the SMS message?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellant, the invention concerns a system and method for selecting and implementing optimal SMS message encoding in a wireless communications device having SMS capabilities, wherein the system includes an optimizing subsystem and an encoding subsystem. The optimizing subsystem accepts an SMS message, identification of available encoding formats, and information regarding wireless device resource encoding requirements, such as memory usage, for the available encoding formats. The optimizing subsystem evaluates the characters in the SMS message to identify which of the available encoding formats are usable for encoding the characters, determines a memory usage requirement, and

selects, as the optimal encoding format having the lowest memory usage. The optimizing subsystem has an output to supply an optimizing signal identifying the optimal encoding format. The encoding subsystem accepts the SMS message and the optimizing signal, and encodes the message in the optimal encoding format. The encoding subsystem also has an output to supply the encoded SMS message to a wireless device memory circuit. The memory circuit supplies the stored SMS message for presentation on a user display or transmission by a transceiver (Spec. 5:4-22).

Lee

2. Lee teaches digital mobile communication terminal with an SMS function having an encoder/decoder 16, which is generally a chip specifically designed for use in a CDMA or PCS terminal, that encodes the signal generated by the CDMA or PCS terminal under the control of the controller 10 and outputs the encoded signal to the RF module 15. In addition, the encoder/decoder 16 decodes the signal input from the RF module 15 by the CDMA or PCS terminal and outputs the decoded signal to the controller 10. A keypad 12 is a user interface which includes a number of numeric keys for dialing and function keys for performing various functions. The keypad 12 generates key data to the controller 10 upon key manipulation by the user. A display 13, preferably an LCD (Liquid Crystal Display), displays display data under the control of the controller 10 (Fig. 1; col. 2, ll. 39-52).

Moskowitz

3. Moskowitz teaches a hand-held portable facsimile transmitter which is capable of communicating with a variety of different message receiving hosts. The transmitter is provided with a technique for generating

waveforms to communicate with foreign message receivers over a communication channel by using a lookup table and software implementation in combination with a telephone interface circuit. Also provided is a versatile encoding protocol in which a message is optionally converted to a 4-bit, 5-bit, or 6-bit sequence, or to a sequence of variable-length bit-strings, the converted message is queued and regrouped as 4-bit nibbles, and the nibbles are communicated by DTMF tones (Abstract).

4. Moskowitz discloses a communication system having a number of different character coding representations from which the transmitter may select. The transmitter encodes the message that is to be sent to the receiver according to each format. The format that requires the fewest number of binary bits to represent the entire message is selected as the character encoding format. The transmitter may select from a number of character coding representations using data compression techniques. The transmitter may represent outgoing characters as 4-bit, 5-bit, 6-bit, and variable length binary bit representations. Four-bit encoding may be utilized when the characters in a message consist only of 16 often-used predefined characters, typically numerals only (col. 12, ll. 1-18).

5. Moskowitz discloses that the transmitter will have to encode the message according to the 5, 6, and variable-bit encoding methods and determine which mode is the most efficient mode of transmission, i.e., which mode requires the smallest number of binary bits to represent the message (col. 13, ll. 40-45)

Wolf

6. Wolf discloses a method and apparatus for constructing high rate trellis codes for PSK modulation that can be encoded and decoded using

the encoder and decoder for a rate 1/2 punctured convolutional code. In particular, the design of trellis encoders and decoders for 2^k -PSK modulation for rates (km-1)/km for k≥3 and m≥1 is provided (Abstract).

Kim

7. Kim discloses a method of transmitting and receiving graphic data by an SMS message. To transmit a graphic SMS message, graphic SMS messages are registered, a portable radio terminal is changed over to a graphic SMS message selection mode upon receipt of an SMS message editing key signal, a graphic SMS message is selected among the registered graphic SMS messages, and the graphic data of the selected graphic SMS message is edited and transmitted. An SMS message is identified as text data or graphic data according to a one-byte header flag that discriminates between text data and graphic data according to its pattern. The header indicates whether the SMS data represents a line, a curved line, a polygon, or text (Abstract; ¶¶ [0026-27]).

King

8. King discloses a selective call receiver (100) which comprises a receiver (104) for receiving a message and a controller (112) having the capability of determining the length of a received message. At least one of at least two displays (110, 120) is selected to display the received message according the received message length (Abstract).

Murray

9. Murray discloses an evaluator system which accepts input textual messages in unknown languages and assesses which character sets, corresponding to languages, match that message. Textual messages whose individual characters are encoded in 16-bit Unicode of other universal

format are parsed, and character sets which can express each character and the accumulated correspondence are logged. When the character sets against which the message is being tested only provide partial matches, the invention can determine which offers the best fit, including by way of a weighting function. The evaluation technology of the invention can be applied to multipart documents, and to search engines and indices (Abstract).

PRINCIPLES OF LAW

On the issue of obviousness pursuant to 35 U.S.C § 103, the Supreme Court has stated that "[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). Further, the Court stated "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419-20.

The determination of obviousness must consider, *inter alia*, whether a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000). Where the teachings of two or more prior art references conflict, the Examiner must weigh the power of each reference to suggest solutions to

one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991). If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Further, our reviewing court has held that "[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); *see also Para-Ordnance Mfg., Inc. v. SGS Imps. Int'l, Inc.*, 73 F.3d 1085, 1090 (Fed. Cir. 1995).

ANALYSIS

Claims 11-17

Independent Claim 11 recites

> an optimizing subsystem with an input to accept an SMS message, an input to accept an evaluation control signal, and an output to supply an optimizing signal responsive to SMS message character encoding requirements prior to character encoding of the SMS message; and
>
> a character encoding subsystem with an input to accept the SMS message, an input to accept the optimizing signal, and an output to supply the SMS message in a character encoding format responsive to the optimizing signal.

The Examiner finds that Lee discloses a mobile communication device that implements SMS encoding (Ans. 4; FF 2). The Examiner finds that Moskowitz discloses that binary bit character encoding formats are evaluated in order to select the fewest binary bit character encoding format

for encoding transmitting message (Ans. 4; FF 3-5). The Examiner finds that Moskowitz discloses supplying an optimization signal prior to encoding the message (Ans. 11).

Appellant contends that the combination of Lee and Moskowitz does not disclose an optimizing subsystem that produces an optimizing signal responsive to the SMS message character encoding requirements prior to character encoding of the SMS message (App. Br. 10-11). Appellant contends that Moskowitz discloses a portable transmitter that requires that the text message must be encoded in every available format (4-bit, 5-bit, 6-bit, and variable length binary bit representations) *prior* to the transmitter selecting which format results in the fewest bits (App. Br. 11; FF 3-5). Appellant contends that the transmitter in Moskowitz does not encode a message in response to an optimizing signal (App. Br. 12).

We agree with Appellant that the combination of Lee and Moskowitz does not disclose an optimization signal that signals an encoding unit to encode the SMS message, wherein the optimizing signal is "responsive to SMS message character encoding requirements *prior to* character encoding of the SMS message" (emphasis added) as claim 11 requires (App. Br. 12). We also agree with Appellant that the combination of Lee and Moskowitz does not disclose selection of the optimum format *prior to* character encoding as the claim requires (App. Br. 11). Moskowitz discloses that the "transmitter encodes the message that is to be sent to the receiver according to *each format* [, wherein t]he format that requires the fewest number of binary bits to represent the entire message is selected as the character encoding format" (FF 4 (emphasis added)). Moskowitz thus makes clear that character encoding "according to each format" occurs prior to selection

of the optimum format. The disclosure in Moskowitz is silent as to an optimizing signal sent to the transmitter that triggers the selected character encoding format (FF 3-5).

We find that the combination of Lee and Moskowitz does not teach all the limitations of independent claim 11. Thus, we find error in the Examiner's rejection of claims 11-17 under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Moskowitz, and we will not sustain the rejection.

Claim 18

We reversed *supra* the rejection of parent claim 11 under 35 U.S.C. § 103 as unpatentable over Lee in view of Moskowitz. The cited reference to Wolf does not teach the limitations deemed to be absent from Lee and Moskowitz. We therefore reverse the rejection of claim 18 under 35 U.S.C. § 103 as unpatentable over Lee in view of Moskowitz and Wolf for the same reasons expressed with respect to claim 11.

Claims 19-21, 23, 24, and 28-30

Claim 19 recites "encoding a[n] SMS message using a[n] SMS character encoding format to generate an encoded SMS message; and prior to encoding the SMS message, selecting the SMS character encoding format based on a wireless device resource requirement of the encoded SMS message."

The Examiner finds that Kim discloses a method for generating encoded SMS message for transmitting over the network, wherein the SMS system encoding disclosed in Kim inherently includes character SMS encoding format (Ans. 7). The Examiner finds that Moskowitz discloses that binary bit character encoding formats are evaluated in order to select the

fewest binary bit character encoding format for encoding transmitting message (Ans. 7).

Appellant contends that the message disclosed in Moskowitz must be encoded prior to the selection of the format that yields the least bits (App. Br. 13). Appellant contends further that Kim does not teach or suggest selecting a character encoding format; rather, Kim discloses a system for encoding graphics in an SMS message and discusses indicating whether the SMS data represents graphics or text (App. Br. 14; FF 7).

We agree with Appellant that Moskowitz does not disclose that the optimum format is selected *prior to* character encoding the SMS message as required by the claim. Specifically, Moskowitz discloses that the "transmitter encodes the message that is to be sent to the receiver according to *each format* [, wherein t]he format that requires the fewest number of binary bits to represent the entire message is selected as the character encoding format" (FF 4, emphasis added). Moskowitz thus makes clear that character encoding "according to each format" occurs prior to selection of the optimum format.

We find that the combination of Kim and Moskowitz does not teach all the limitations of claim 19, as well as claim 28, which includes similar limitations. Thus, we find error in the Examiner's rejection of claims 19-21, 23, 24, and 28-30 under 35 U.S.C. § 103(a) as unpatentable over Kim in view of Moskowitz, and we will not sustain the rejection.

Claims 26 and 27

We reversed *supra* the rejection of parent claim 19 under 35 U.S.C. § 103 as unpatentable over Kim in view of Moskowitz. The cited reference does not teach the limitations deemed to be absent from Kim and

Moskowitz. We therefore reverse the rejection of claims 26 and 27 under 35 U.S.C. § 103 as unpatentable over Kim in view of Moskowitz and King for the same reasons expressed with respect to claim 19.

Claim 22

We reversed *supra* the rejection of parent claim 19 under 35 U.S.C. § 103 as unpatentable over Kim in view of Moskowitz. The cited reference does not teach the limitations deemed to be absent from Kim and Moskowitz. We therefore reverse the rejection of claim 22 under 35 U.S.C. § 103 as unpatentable over Kim in view of Moskowitz and Murray for the same reasons expressed with respect to claim 19.

Claim 25

We reversed *supra* the rejection of parent claim 19 under 35 U.S.C. § 103 as unpatentable over Kim in view of Moskowitz. The cited reference does not teach the limitations deemed to be absent from Kim and Moskowitz. We therefore reverse the rejection of claim 25 under 35 U.S.C. § 103 as unpatentable over Kim in view of Moskowitz and Wolf for the same reasons expressed with respect to claim 19.

CONCLUSION OF LAW

Appellant has shown that the Examiner erred in finding that the combination of the cited prior art discloses a system for optimal SMS character encoding having an optimizing subsystem that generates an optimizing signal for controlling when a character encoding subsystem supplies the SMS message in a character encoding format responsive to the optimizing signal, wherein the optimizing signal is responsive to the SMS

message character encoding requirements prior to character encoding of the SMS message.

ORDER

The Examiner's rejection of claims 11-30 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED

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KYOCERA Wireless Corp.
P.O. BOX 928289
San Diego, CA 92192-8289